



DOCKET: 15920030146US1

PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

INVENTOR: Stephen W. Bedell et al. )  
)  
SERIAL NO.: 10/604,989 )  
) DATE: November 10, 2004  
FILING DATE: August 29, 2003 )  
)  
FOR: AN ELECTRON MICROSCOPE MAGNIFICATION STANDARD  
PROVIDING PRECISE CALIBRATION IN THE MAGNIFICATION  
RANGE 5000X – 200,000X

**COMMENTS ON STATEMENT OF REASONS FOR ALLOWANCE**

Mail Stop Issue Fee  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

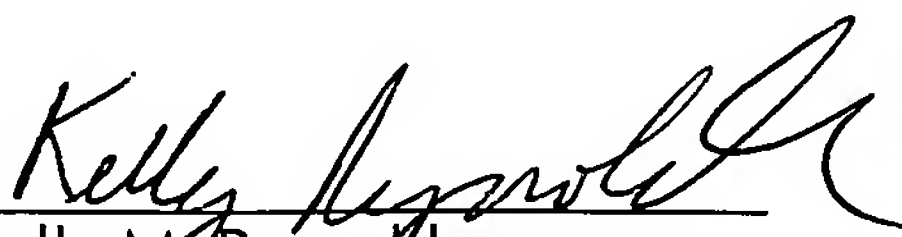
Dear Sir:

In the Notice of Allowability, the Examiner's statement of reasons for allowance is that the prior art does not teach how to make or use an electron microscopy calibration standard comprising a single substrate having two layers and a plurality of differing sized island structures with varying lattice parameters comprising a material of a transformation layer over the second layer and a third layer over portions of the second layer and entirely covering each of the island structures, wherein the first layer and each of the island structures have varying fringe spacings across the substrate corresponding to a range of magnification settings.

Applicants submit that the prior art also does not teach a method for forming an electron microscopy calibration standard on a single structure that at least includes the steps of providing a single substrate having at least a first layer and a second layer in lattice alignment, depositing a material of a transformation layer over the second layer, forming a plurality of differing sized bi-layer stacks, each comprising the second layer and transformation layer, and modifying each of the plurality of bi-layer stacks so as to transform the second layer within each of the differing sized bi-layer stacks into a plurality of differing sized island structures with varying lattice parameters. These plurality of differing sized island structures comprise the material of the transformation layer, thereby providing a pattern of varying sized features with varying lattice parameters on the single substrate. As such, the prior art does not teach the further step of fabricating an electron microscopy calibration standard of the pattern of the varying sized features on the single substrate.

In view of the foregoing, applicants agree that the instant claimed invention is allowable over the prior art of record.

Respectfully submitted,

  
 Kelly M. Reynolds  
 Reg. No. 47,898

**DeLIO & PETERSON, LLC**  
 121 Whitney Avenue  
 New Haven, CT 06510-1241  
 (203) 787-0595  
 ibmf100386000comment-noa

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service on the date indicated below as first class mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231

Name: Carol M. Thomas Date: November 10, 2004 Signature: 